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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/389,826

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SCHROEDER

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EXAMINER

NADAV, D

ART UNIT

PAPER NUMBER

2811

DATE MAILED: 12/18/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/389,826

Applicant(s)

Schroeder et al.

Examiner

ORI NADAV

Group Art Unit

2811

☒ Responsive to communication(s) filed on Jan 20, 2000

☐ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-5 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-5 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 1,5

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claimed limitation of a second conductivity type first zone forming the other anode and cathode are of the SCR element, as recited in claim 1, is unclear as to how a second conductivity type region can form two opposite conductivity type regions, namely anode and cathode regions.

3. Claim 4 recites the limitation "said further zone" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

4. The phrase "a coherent zone", as recited in claim 4, is unclear as to what is it meant.

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Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-5, insofar as in compliance with 35 U.S.C. 112, are rejected under 35 U.S.C. 102(b) as being anticipated by Ker et al. (5,572,394).

Ker et al. teach in figure 9 a semiconductor device having an ESD protection means being an SCR and a gated electrode, provided in a surface area (P-SUBSTRATE) of a first conductivity type having a well (N-WELL) of a second conductivity type in which a surface zone (P+) of the first conductivity type is formed forming one of the anode and cathode of the SCR element, the surface area having a surface zone (N+) of the second conductivity type, noted as a first zone, situated remotely from the well and forming the other anode and cathode area of the SCR element, the gated diode containing a gate insulated from the surface area and a highly doped (N+) second conductivity type surface zone aligned to the gate, noted as a second zone, which aligned surface zone partly overlaps the well of the second conductivity type, wherein the second zone stretches out only along a part of the periphery of the well, whereas the first zone is provided along at least another part of this periphery which is free from the second zone.

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Regarding claim 2, Ker et al. teach in figure 11 the gate of the gated electrode substantially stretches out only along the part of the periphery of the well along which also the second zone stretches out.

Regarding claim 3, the gated diode having a further surface zone (N+) of the second conductivity type deposited in the surface area of the first conductivity type and forming the other of the source/drain zones of the transistor, wherein the first zone being situated at a shorter lateral distance from the surface zone provided in the well than the further surface zone.

Regarding claim 4, although Ker et al. do not explicitly disclose a further zone and a first zone form a coherent zone this feature is inherent in Ker et al.'s device, because Ker et al.'s structure is identical to the claimed structure.

Regarding claim 5, the first and second conductivity types are p and n conductivity types, respectively, wherein the first zone and the first conductivity type zone in the well form the cathode and anode of the SCR element, respectively.

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Papers related to this application may be submitted to Technology center (TC) 2800 by facsimile transmission. Papers should be faxed to TC 2800 via the TC 2800 Fax center located in Crystal Plaza 4, room 4-C23. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Group 2811 Fax Center number is (703) 308-7722 and 308-7724. The Group 2811 Fax Center is to be used only for papers related to Group 2811 applications.

Any inquiry concerning this communication or any earlier communication from the Examiner should be directed to *Examiner Nadav* whose telephone number is (703) 308-8138. The Examiner is in the Office generally between the hours of 7 AM to 3 PM (Eastern Standard Time) Monday through Friday.

Any inquiry of a general nature or relating to the status of this application should be directed to the **Technology Center Receptionists** whose telephone number is 308-0956

Ori Nadav, Ph.D.

December 10, 2000

William Mintel
William Mintel
Primary Examiner
APR 2001